

That the summer rainfall at New Orleans is markedly influenced by its topography is shown by a comparison of the number of days on which 0.01 inch or more of precipitation occurs at New Orleans, with the same records at other stations located along the Gulf coast, but not so nearly surrounded by water. For the purpose of this comparison, the records of New Orleans and Lake Charles, La., Pensacola, Fla., and Galveston, Tex., have been chosen, and it is found that the average number of rainy days for the four months considered is as follows: New Orleans, 53; Lake Charles, 34; Galveston, 36; and Pensacola, 47.

A study of the intensity of the hourly rainfall was also made, but the short period covered by the records and

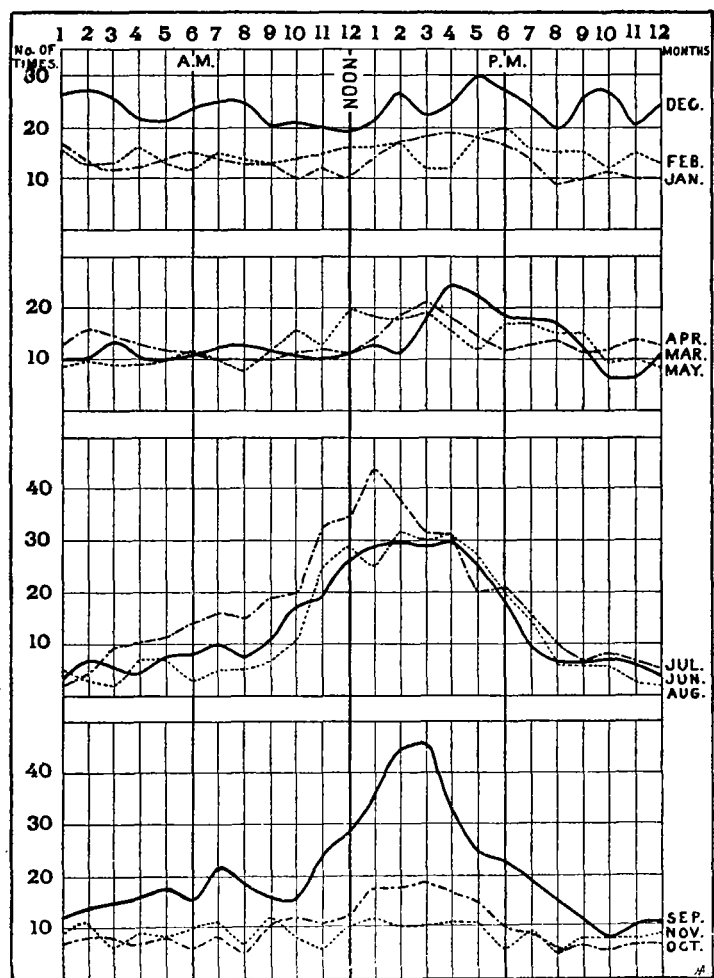


FIG. 1.—Curves of hourly frequency of precipitation at New Orleans, La., for each month (1905-1913).

the possibility of the occurrence of excessive rainfall during any hour render it impossible to draw any conclusions as to the hour of most intense precipitation.

It is believed that a study of the hourly precipitation records, especially a study of the frequency, will open up a new field for the use of Weather Bureau records, because contractors, engineers, agriculturists, and others whose occupations necessitate their working out of doors would, by means of these hourly frequency data, be enabled to arrange their work and that of their employees, so that it would be performed during those hours when there is the least likelihood of its being interrupted by rainfall, and in this way, perhaps, a great deal of valuable time would

be saved, not to speak of the saving of damage suits, etc., on account of baggage, produce, and other articles being injured by dampness when being transferred at a time of the day when there is more probability of rainy than of dry weather.

The table and charts are appended in order that those who may care to do so can have the exact information at hand and can draw their own conclusions.

TABLE 1.—The number of times 0.01 inch or more of rain was recorded at New Orleans, La., during 9 years, for each hour of the 12 months.

| Months.        | A. M.—Hours ending at— |    |    |    |    |    |    |    |    |    |    |    | Noon. |
|----------------|------------------------|----|----|----|----|----|----|----|----|----|----|----|-------|
|                | 1                      | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 |    |       |
| January.....   | 17                     | 13 | 12 | 12 | 14 | 15 | 14 | 13 | 13 | 10 | 12 | 10 |       |
| February.....  | 16                     | 13 | 13 | 16 | 13 | 12 | 15 | 14 | 13 | 14 | 15 | 16 |       |
| March.....     | 10                     | 10 | 14 | 10 | 10 | 11 | 13 | 12 | 11 | 11 | 10 | 11 |       |
| April.....     | 13                     | 16 | 15 | 13 | 12 | 11 | 10 | 10 | 10 | 11 | 12 | 11 |       |
| May.....       | 9                      | 10 | 9  | 9  | 10 | 11 | 10 | 8  | 12 | 16 | 13 | 20 |       |
| June.....      | 3                      | 7  | 5  | 4  | 8  | 8  | 10 | 7  | 11 | 18 | 19 | 27 |       |
| July.....      | 2                      | 4  | 9  | 10 | 11 | 14 | 16 | 15 | 19 | 20 | 33 | 34 |       |
| August.....    | 5                      | 3  | 2  | 7  | 7  | 3  | 5  | 5  | 7  | 11 | 25 | 29 |       |
| September..... | 12                     | 14 | 15 | 16 | 18 | 15 | 22 | 18 | 16 | 15 | 25 | 28 |       |
| October.....   | 7                      | 8  | 8  | 7  | 8  | 6  | 9  | 5  | 11 | 12 | 11 | 12 |       |
| November.....  | 9                      | 11 | 6  | 9  | 8  | 10 | 11 | 7  | 12 | 8  | 6  | 10 |       |
| December.....  | 26                     | 27 | 26 | 21 | 21 | 24 | 25 | 25 | 20 | 21 | 20 | 19 |       |

| Months.        | P. M.—Hours ending at— |    |    |    |    |    |    |    |    |    |    | Mid't. |
|----------------|------------------------|----|----|----|----|----|----|----|----|----|----|--------|
|                | 1                      | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 |        |
| January.....   | 14                     | 17 | 18 | 19 | 18 | 17 | 14 | 9  | 10 | 11 | 10 | 10     |
| February.....  | 16                     | 17 | 12 | 12 | 19 | 20 | 16 | 15 | 15 | 12 | 15 | 13     |
| March.....     | 13                     | 11 | 19 | 25 | 22 | 18 | 18 | 17 | 12 | 6  | 6  | 11     |
| April.....     | 14                     | 19 | 21 | 18 | 14 | 12 | 13 | 14 | 11 | 12 | 14 | 13     |
| May.....       | 19                     | 18 | 19 | 16 | 12 | 17 | 17 | 15 | 15 | 9  | 10 | 8      |
| June.....      | 29                     | 30 | 29 | 30 | 25 | 18 | 9  | 6  | 6  | 7  | 6  | 4      |
| July.....      | 44                     | 38 | 31 | 31 | 30 | 21 | 16 | 10 | 7  | 8  | 6  | 5      |
| August.....    | 25                     | 32 | 30 | 31 | 27 | 30 | 15 | 6  | 6  | 6  | 3  | 2      |
| September..... | 37                     | 45 | 46 | 32 | 24 | 23 | 19 | 15 | 12 | 8  | 11 | 11     |
| October.....   | 18                     | 18 | 19 | 17 | 15 | 10 | 9  | 6  | 7  | 6  | 7  | 7      |
| November.....  | 12                     | 10 | 10 | 11 | 11 | 6  | 9  | 6  | 8  | 8  | 8  | 9      |
| December.....  | 21                     | 27 | 22 | 24 | 30 | 27 | 24 | 19 | 26 | 27 | 20 | 24     |

#### DROUGHT VERSUS IRRIGATION.

Many years ago the MONTHLY WEATHER REVIEW called the attention of our numerous observers and correspondents to the importance and possibility of providing beforehand for the supply of water that would be needed in the long droughts to which this country is subject. Of recent years everyone has heard of the droughts and the disastrous loss of crops in that western region that in 1850 was known as the "great American desert." The great progress that has been made since those days has enabled western agriculturists to diminish the danger of a disaster from droughts; indeed, by the help of the Reclamation Service they are turning deserts into gardens. But meanwhile we must repeat our advice of years ago, which seems especially applicable to New England and the Middle States, to the effect that it is not necessary for a farmer to be at the mercy of droughts and uncertain local rains. A drought of 30 days during June or July or August may be as injurious in the Atlantic States as anywhere else, and yet experience shows that an abundance of water is available at a short distance below the ground. A recent Farmers' Bulletin, No. 592, of the Department of Agriculture, although it appears to be specifically intended for western grazing lands, contains abundance of good suggestions applicable to the Atlantic States. Deep bored wells and springs often furnish sufficient water for local crops and cattle if only it is used economically. The expense of a well and pump is saved in one or two years by the resulting increase of

the local crop, and the combination of several farmers in maintaining and using a single deep well should generally be practicable. Doubtless a special edition of Farmers' Bulletin No. 592 for the use of farmers in the Atlantic States is desirable, but meanwhile that bulletin itself should not be neglected.

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#### UNIT OF ACCELERATION.

In the recent MONTHLY WEATHER REVIEWS, pages 5, 100, 141, 143, we find various suggested terms for the

unit of acceleration, some one of which would be convenient in daily meteorological use. In *Nature* (London), August 13, 1914, page 611, Dr. Otto Klotz, director of the Dominion Observatory, Ottawa, writes:

"So long ago as 1909 Weichert used the term 'gal' for that unit in the report of the Göttingen earthquake station, being the first syllable of Galileo, whence Mr. Whipple derives his 'leo.' Others, as well as myself, have used 'gal,' or rather 'milligal,' in analyses of earthquakes. A 'milligal' is approximately a millionth of *g*. *Dyne* is the unit of force; *gal* the unit of acceleration."